

Date: Tuesday, 4/4/2006 1:27:14 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BEARPAW CLAMP
Job Number	: 26491		
Estimate Number	: 10667		
P.O. Number	: N/A	Part Number	: D2870
This Issue	: 4/4/2006	S.O. No.	: N/A
Prsht Rev.	: NC	Drawing Number	: D2870 REV A
First Issue	: N/A	Project Number	: N/A
Previous Run	: N/A	Drawing Revision	: A
Written By	Signature: COMMENT Below Due Date		
Checked & Approved By	Signature: 04.04.04		
Comment	Est. B-02.01.17 Added laser cutting. NG/EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	PG	PURCHASING
	Comment: PURCHASING Issue P/O: 953	Laser cut as per Dwg D2870Mat'l AISI 304/316 SS .75 wide x .063 thick. Material release note required
2.0	D2870F	Bearpaw Clamp
	Comment: Qty.: 1.0000 Each(s)/Unit Bearpaw Clamp	Total : 100.0000 Each(s)
3.0	PACKAGING 1	PACKAGING RESOURCE #1
	Comment: PACKAGING RESOURCE #1 Recieve & Inspect for Transit Damage Ensure Material Release Note is attached	
4.0	QC6	DIMENSIONAL CHECK
	Comment: DIMENSIONAL CHECK Inspect Level 6 (5.233 end to end" 4.433 center to center)	
5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
	Comment: SMALL & MEDIUM FAB RESOURCE 1 Deburr any rough edges after tumbling	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 4/4/2006 1:27:14 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARPAW CLAMP

Job Number: 26491

Part Number: D2870

Job Number:



Seq. #:	Machine Or Operation:	Description :
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6.0	BRAKE NC	NC BRAKE
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Comment: NC BRAKE

Form as per Dwg D2870 Use brake to form ends.

Finish form using DT8295

7.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

8.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1

Tumble

SAO 06:05:03

06:05:04

100

9.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST 168

168  
ST 231

R 6/0/0

6/0/0

98

10.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/05/08

98

Job Completion



6/0/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06/05/08	8	Tumbling should be done before QCS. Right after forming.  Permanent change.					✓ 06/05/08
06/05/08	8	SCRAP <del>Spices</del>					

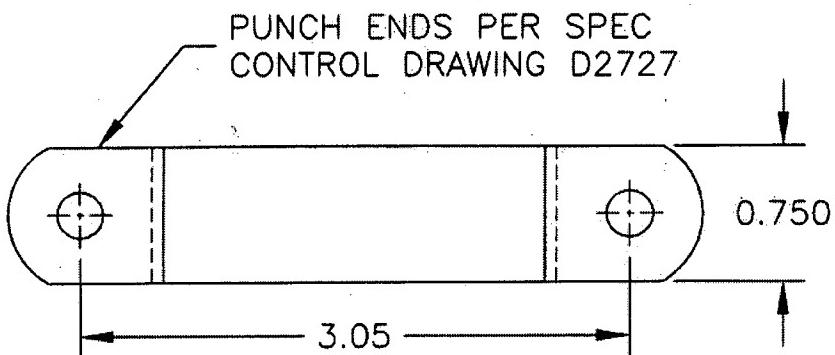
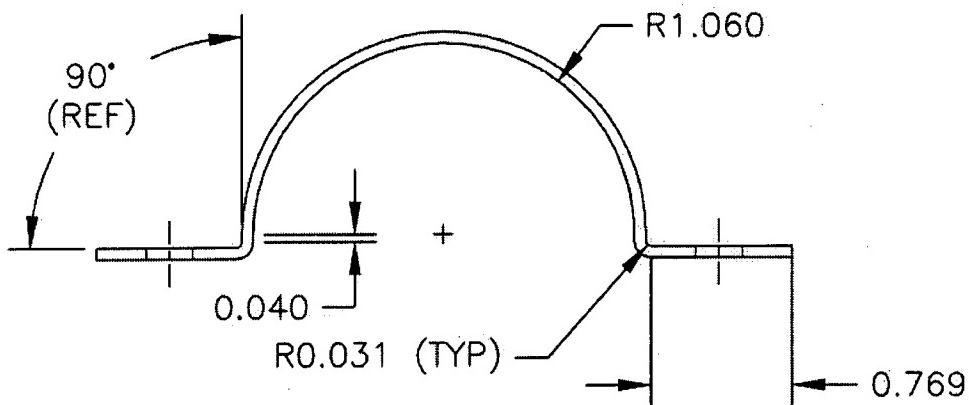
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No DQA:  Date: 06/05/08  
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/05/08	8	Scrap 2 pieces on scrap Parts fell behind machine with other parts.	MS 06/05/08	unable to verify batch SCRAP.	SAM 06/05/08	✓ 06/05/08	MS 06/05/08	✓ 06/05/08

NOTE: Date & initial all entries

**DART**

DESIGN <i>RE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CP</i>	APPROVED <i>CK</i>	DRAWING NO. D2870	REV. A SHEET 1 OF 1
DATE 99.03.18		TITLE CLAMP	SCALE 1:1
A	99.03.18	NEW ISSUE	

**RELEASED**  
99.04.14 KE

FLAT LENGTH: 5.233 END-END  
4.433 HOLE-HOLE

SHOP COPY

RETURN TO  
ENGINEERING

UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER

NO. 26491

MATERIAL: AISI 304/316 SS 0.75 WIDE x 0.063 THICK

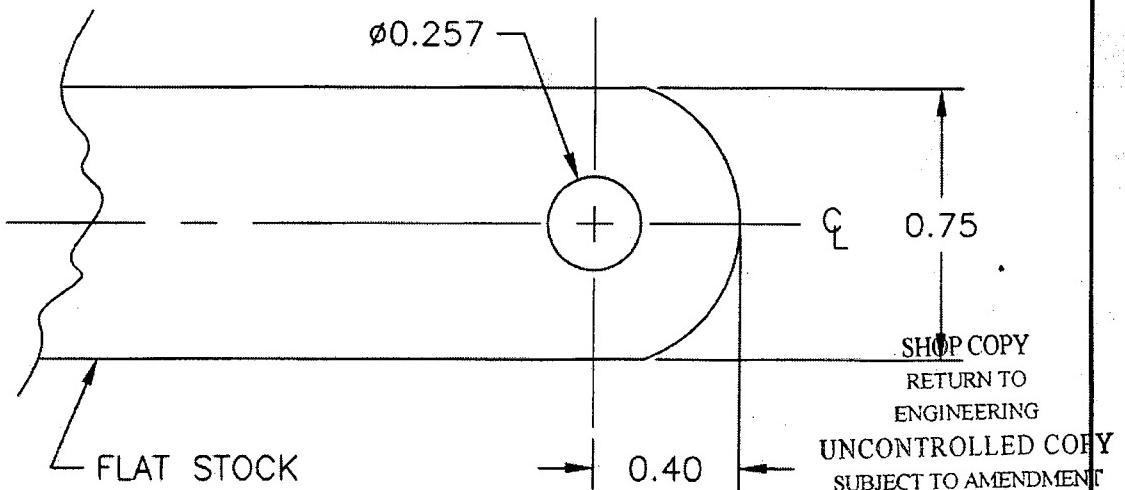
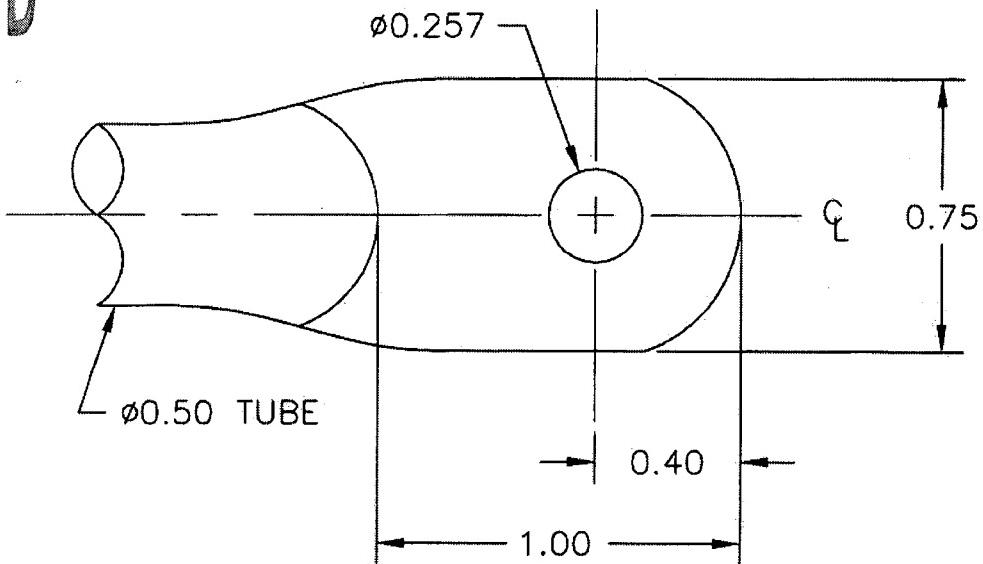
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

**DART**

DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA		
CHECKED <i>DMY</i>	APPROVED <i>CH</i>	DRAWING NO. D2727	REV. A	SHEET 1 OF 1
DATE 97.11.24		TITLE PUNCH DT8012 SPEC CONTROL	SCALE 2:1	
A	97.11.24	NEW ISSUE		
A1	<del>HCP</del> 01.12.20	ADD TOLERANCE NOTE		

## SPECIFICATION CONTROL DRAWING FOR PUNCH DT8012

**RELEASED**  
98/03/06 KE



NOTE: TOLERANCES ARE PER DART QSI 01B UNLESS OTHERWISE NOTED.

△ A1  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 26491

SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT

# CERTIFICATE OF COMPLIANCE

## CERTIFICAT DE CONFORMITE



**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 1 OUR JOB NO J0142096 SHIPPING MEMO 0335867

ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
	<u>100 PCS</u>	<u>PO00000953</u>	<u>D2870F</u>		<u>CLAMP</u>	<u>A</u>
MATERIAL			SUPPLIED BY			MAT. REL. NO.
			<u>SAMUEL SPECIALTY</u>			<u>0066654 ATT'D</u>

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 26 APRIL 2006

G.F.I. Q.C. REP. Patton



*AB  
06/04/06*

**LES MÉTAUX  
SPÉCIALISÉS**  
**SAMUEL**

Programme d'Assurance Qualité Enregistré / Registered Q.A. Program  
ISO 9001:2000 AS9100

**LETTRE DE CONFORMITÉ -LETTER OF COMPLIANCE**

Date: 1 AOÛT 2005

Company Name: G.F.I. Division of Thomas & Betts Limited  
 Address: 180 avenue Labrosse  
 City: Pointe Claire, Qué.  
 Zip Code: H9R 1A1

# du client: 0066654

# de commande SSMQ: 843000

Customer's order #:

SSMQ's Order #:

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Notre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Gauge/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
1	10	.060" X 48" X 96"	304 2B		7341615

Bien à vous,  
Yours truly,

José Raymond

Commis à l'administration.  
Administration Clerk.



LES MÉTAUX SPÉCIALISÉS SAMUEL, 21525 CLARK-GRAHAM, BAIE D'URFÉ, QUÉBEC H9X 3T5  
SAMUEL SPECIALITY METALS, 21525 CLARK-GRAHAM, BAIE D'URFÉ, QUÉBEC H9X 3T5

TÉL: 514-457-3399  
FAX: 514-457-9393

LET. DE. COM 12/01/04

*10/04/04*

PAGES: 002 R=92%

ID: SAMUEL ET FILS

FAX: AK Steel Rich Fax

FEU-17-2005 06:45



**AK Steel Corporation**  
**Metallurgical Test Report**  
**Rockport Works**  
**Rockport, IN 47635**

Page 2

Lead No. 7288793  
 SRN No. 7288793

<b>CUSTOMER</b>  SAMUEL & FILS & CIE LTEE (S) PUR DEPT' 2225 FRANCIS HUGHES DRIVE LAVAL, CN H7S1N-5		<b>SHIP TO</b>  SAMUEL & FILES (QUEBEC) LTEE 2225 FRANCIS HUGHES LAVAL, CN H7S1N-5		<b>MILL ORDER NO.</b> 252501-0513		<b>PROCESSOR ORDER NO.</b> C97428-1	
				<b>BUYERS ORDER NO.</b> C97428-1		<b>PART NO.</b>	
<b>PARENT COIL ID</b> CS93431-05B	<b>POS (P/T)</b> T	<b>DIR (L, T, D)</b>	<b>COND</b> A.S.T.M	<b>ASTM A 262 PRACTICE E</b> PASS	<b>BEND 180 IT</b> OK		
<p>THIS CHEMICAL ANALYSIS AND PHYSICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT AS CONTAINED IN THE RECORDS OF THIS CORPORATION.</p> <p>ALL TESTING IS DONE IN ACCORDANCE WITH A.S.T.M. STANDARDS UNLESS OTHERWISE NOTED</p> <p>AK Steel Corporation MWQC90049 3/99</p> <p>SIGNED <i>[Signature]</i> DATE 02/17/2005 TIME 08:23 AM QUALITY MANAGER <i>[Signature]</i> 02/17/2005</p>							



**AK Steel Corporation**  
**Metallurgical Test Report**  
**Rockport Works**  
**Rockport, IN 47635**

Page 1

Load No. 7288793  
SRN No. 7288793

CUST MER	SAMUEL & FILS & CIE LTÉE (S) PUR DEPT 2225 FRANCIS HUGHES DRIVE LAVAL, CN H7S1N-5	S H Y P T O	SAMUEL & FILS (QUEBEC) LTÉE 2225 FRANCIS HUGHES LAVAL, CN H7S1N-5	MILL ORDER NO.	PROCESSOR ORDER NO.
				2E2S02-0523	C97428-1
				BUYERS ORDER NO. C97428-1	PART NO.

COIL ID	HEAT	PARENT COIL ID	WEIGHT	ENGLISH UNITS		-PRODUCT SIZES-		METRIC UNITS	
503431-05BA	7341615	0503431-05B	13,140 LBS. 5,960 KG.	.0590	NOM	48.0000	X COIL		
503431-05BB	7341615	0503431-05B	13,050 LBS. 5,919 KG.	.0590	NOM	48.0000	X COIL		
503431-05BC	7341615	0503431-05B	13,130 LBS. 5,956 KG.	.0590	NOM	48.0000	X COIL		

L-Ladie Analysis of Heat P-Product Analysis of Parent Coil **CHEMICAL ANALYSIS**

ID	C	MN	P	S	SI	CR	NI	MO	N	CU					
L 7341615	.052	1.385	.032	.0011	.342	18.18	8.10	.35	.0390	.37					

SHIPPING DATE: 02/16/2005

REMARKS: NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS WERE MADE OR USED THROUGHOUT THE PROCESSING AND TESTING OF THIS MATERIAL. MATERIAL FREE OF RADIOACTIVE ISOTOPES

**PRODUCT DESCRIPTION**

CR SHPT TYPE 304 STAINLESS #2B FINISH SLIT EDGE TEST REPORTS \* ASTM A 240 -04 EX PARA 3.1.9 ELONG WILL BE DETERMINED BY ASTM E 8  
\* ASTM A 480 -01 EX PARA 19.1.1 ELONG WILL BE DETERMINED BY ASTM E 8 EX PARA 25.1.1.3 COIL WILL BE TAGGED ON OUTSIDE ONLY \* ASTM E SA-240 SECTION IX PART A (2001 ED, 2002 ADDENDA) EX PARA 3.1.9 ELONG WILL BE DETERMINED BY ASTM E 8 \* ASME SA-480 SECTION II PART A (2001 ED) EX PARA 19.1.1 ELONG WILL BE DETERMINED BY ASTM E 8 EX PARA 25.1.1.3 COIL WILL BE TAGGED ON OUTSIDE ONLY \* AST M A 262 -01 PRACTICE E \* ASTM A 666 -00 EX 6.1.9 ELONG WILL BE DETERMINED BY ASTM E 8, EX 7.1 TEST SPECIMENS WILL BE SELECTED IN THE TRANSVERSE TEST DIRECTION IN ALL CASES.

PARENT COIL ID	POS (R/T)	DIR (L, T, B)	COND	% ELONG	TENSILE STRENGTH (KSI)	Y.S 2% OFFSET (KSI)	ROCKWELL HARDNESS (HRC)	ROCKWELL HARDNESS (HRB)		
0503431-05B	T	T	A.A.T.M	58.2	94.7	47.1	B 85.3	B 85.8		

OK  
04/05/05

\*\*\* CONTINUED ON NEXT PAGE \*\*\*

26/05/05  
10:00 AM  
03/03/05